WHAT IS CLAIMED IS:

1. A data converter for use in a network system comprised of a plurality of communication nodes in which data transmitted from a transmitter communication node is received by a receiver communication node, the data converter comprising:

data reception means for receiving data transmitted from the transmitter communication node;

information reception means for receiving a communication network parameter concerning a communication network connecting the communication nodes with each other;

format conversion means for converting a format of the transmitted data received by the reception means;

route control means for determining a communication route, based on a format conversion parameter concerning the format of the transmitted data received by the reception means, a type of format conversion performed by the format conversion means, and a type of a format conversion function of another communication node, and a communication network parameter received by the information reception means; and

transmission means for transmitting the transmitted data converted by the format conversion means to another communication node, in accordance with the communication route determined by the route control means.

2. The data converter according to claim 1, wherein the route control means

determines the communication route, based on information concerning a communication distance between the communication nodes, as the communication network parameter.

3. The data converter according to claim 1, wherein the route control means determines the communication route, based on information concerning a transmission delay between the communication nodes, as the communication network parameter.

4. The data converter according to claim 1, wherein the route control means determines the communication route, based on information concerning a band used between the communication nodes, as the communication network parameter.

5. The data converter according to claim 1, wherein the route control means determines the communication route, based on information concerning a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

6. The data converter according to claim 1, wherein the route control means determines the communication route, based on information concerning an amount of the transmitted data, as the format conversion parameter.

7. The data converter according to claim 1, wherein the route control means determines the communication route, based on information concerning a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter.

8. The data converter according to claim 1, wherein the route control means

determines the communication route, based on information concerning a format of transmitted data which can be received by the receiver communication node, as the format conversion parameter.

9. A data conversion method for use in a network system having a plurality of communication nodes, in which data transmitted from a transmitter communication node is received by a receiver communication node, the method comprising steps of:

receiving previously a communication network parameter concerning a communication network which connects the communication nodes with each other;

converting a format of the transmitted data when the transmitted data from the transmitter communication node is received;

determining a communication route, based on a format conversion parameter concerning a format of the transmitted data, a type of the format conversion, and a type of format conversion function of another communication node, and the communication network parameter, when converting the format of the transmitted data; and

transmitting the converted transmitted data to the another communication node, in accordance with the communication route.

10. The data conversion method according to claim 9, wherein the communication route is determined, based on information concerning a communication distance between the communication nodes, as the communication network parameter.

11. The data conversion method according to claim 9, wherein the communication route is determined, based on information concerning a transmission delay between the communication nodes, as the communication network parameter.

12. The data conversion method according to claim 9, wherein the communication route is determined, based on information concerning a band used between the communication nodes, as the communication network parameter.

13. The data conversion method according to claim 9, wherein the communication route is determined, based on information concerning a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

14. The data conversion method according to claim 9, wherein the communication route is determined, based on information concerning a data amount of the transmitted data, as the format conversion parameter.

15. The data conversion method according to claim 9, wherein the communication route is determined, based on information concerning a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter.

16. The data conversion method according to claim 9, wherein the communication route is determined, based on information concerning a format of transmitted data which can be received by the receiver communication node, as the format conversion parameter.

17. A data transmission/reception apparatus, for use in a network system comprised of a plurality of communication nodes, for relaying data transmitted from the communication node and transmitting the relayed data to another communication node, the data transmission/reception apparatus comprising:

data reception means for receiving data transmitted from another communication node;

route control means for determining a communication route, based on a format of the transmitted data received by the reception means, and a format conversion parameter concerning a type of format conversion of another communication node; and

transmission means for transmitting the transmitted data received by the reception means to another communication node, in accordance with the communication route determined by the route control means.

18. The data transmission/reception apparatus according to claim 17, wherein the route control means determines the communication route, based on information concerning a communication distance, as a communication network parameter.

19. The data transmission/reception apparatus according to claim 17, wherein the route control means determines the communication route, based on information concerning a transmission delay between the communication nodes, as a communication network parameter.

20. The data transmission/reception apparatus according to claim 17, wherein the route control means determines the communication route, based on information concerning a band used between the communication nodes, as a communication network parameter.

21. The data transmission/reception apparatus according to claim 17, wherein the route control means determines the communication route, based on information concerning a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

22. The data transmission/reception apparatus according to claim 17, wherein the route control means determines the communication route, based on information concerning a data amount of the transmitted data, as the format conversion parameter.

23. A data transmission/reception method for relaying data from a communication node and transmitting the transmitted data to another communication node in a network system comprised of a plurality of communication nodes, the method comprising the steps of:

receiving transmitted data;

determining a communication route, based on a format of the received transmitted data, and a format conversion parameter concerning a format conversion function of the another communication node; and

transmitting the received transmitted data to the another communication node, in accordance with the determined communication route.

24. The data transmission/reception method according to claim 23, wherein the communication route is determined, based on information concerning a communication distance, as a communication network parameter.

25. The data transmission/reception method according to claim 23, wherein the communication route is determined, based on information concerning a transmission delay between the communication nodes, as a communication network parameter.

26. The data transmission/reception method according to claim 23, wherein the communication route is determined, based on information concerning a band used between the communication nodes, as a communication network parameter.

27. The data transmission/reception method according to claim 23, wherein the communication route is determined, based on information concerning a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

28. The data transmission/reception method according to claim 23, wherein the communication route is determined, based on information concerning a data amount of the transmitted data, as the format conversion parameter.

29. A network system including a plurality of communication nodes, wherein data transmitted from a transmitter communication node is received by a receiver

communication node, comprising:

information obtaining means for obtaining a communication network parameter concerning a communication network connecting the communication nodes with each other;

format conversion means for converting a format of the transmitted data transmitted from the transmitter communication node; and

route control means for determining a communication route, based on a format conversion parameter concerning the format of the transmitted data transmitted from the transmitter communication node and a type of format conversion performed by the format conversion means, and the communication network parameter obtained by the information obtaining means.

30. The network system according to claim 29, wherein the route control means determines the communication route, based on information concerning a communication distance between the communication nodes, as the communication network parameter.

31. The network system according to claim 29, wherein the route control means determines the communication route, based on information concerning a transmission delay between the communication nodes, as the communication network parameter.

32. The network system according to claim 29, wherein the route control means determines the communication route, based on information concerning a band

used between the communication nodes, as the communication network parameter.

33. The network system according to claim 29, wherein the route control means determines the communication route, based on information concerning a processing delay required for conversion processing at the communication node having the format conversion function, as the format conversion parameter.

34. The network system according to claim 29, wherein the route control means determines the communication route, based on information concerning a data amount of the transmitted data, as the format conversion parameter.

35. The network system according to claim 29, wherein the route control means determines the communication route, based on information concerning a format of transmitted data which can be transmitted from the transmitter communication node, as the format conversion parameter.

36. The network system according to claim 29, wherein the route control means determines the communication route, based on information concerning a format of transmitted data which can be received by the receiver communication node, as the format conversion parameter.

37. The network system according to claim 29, comprising the plurality of communication nodes having the format conversion means, wherein different types of format conversion processing are carried out by each of the format conversion means.

38. The network system according to claim 29, comprising the plurality of communication nodes having the format conversion means, and a predetermined

quantity of format conversion means for format conversion used with a high frequency are provided while a smaller quantity of the format conversion means for format conversion used with a low frequency are provided than the predetermined quantity, based on use frequencies of types of format conversion.

39. The network system according to claim 29, wherein if the transmitter communication node or the receiver communication node can transmit/receive transmitting/transmitted data in a plurality of formats, the route control means obtains a communication route for every type of format, and controls the transmitter communication node or the receiver communication node so as to transmit/receive the transmitting/transmitted data in any of the plurality of formats.